



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,161	10/31/2003	Yu-Chih Wang	252011-1770	9843

47390 7590 02/15/2005

THOMAS, KAYDEN, HOSTEMEYER & RISLEY LLP
100 GALLERIA PARKWAY
SUITE 1750
ATLANTA, GA 30339

EXAMINER

JARRETT, RYAN A

ART UNIT PAPER NUMBER

2125

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,161

Applicant(s)

WANG ET AL.

Examiner

Ryan A. Jarrett

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-9,12-17,20-24 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,12-17,20-24 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/10/05 have been fully considered but they are not persuasive. Applicant argues that *Goerigk* does not teach ***dynamically producing a carrier transfer sub-route of the wafers according to the verification result.*** Applicant apparently bases this argument on the following statement, "mark scanning and data storing disclosed in *Goerigk* is to execute a transfer if the scanned marks show the wafers are to be transferred." However, Applicant has not pointed out where this feature is contained in *Goerigk*, or how this relates to the actual claim language.

Moreover, *Goerigk* teaches the above emphasized feature in at least col. 5 lines 19-38. *Goerigk* states: "The stored wafer attribute information may be accessed by, for example, a computer program controlling the operation of the entire production line, or by an operator via the terminal 3, when an update of the attribute information is required. If, for example, a wafer 11 needs to be split off of a specific wafer lot, the host computer 1 may instruct the wafer sorter 5 to place the wafer 11 into the new position specified by the instructions received via the terminal 3 or a software program run in the host computer 1." This emphasized feature is also clearly taught in col. 8 lines 1-24.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

Art Unit: 2125

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 33 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The examiner has been unable to find support in the original specification for "the first process operation and the second process operation" being **"selected for processing of the wafers prior to executing the first process operation"**.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4-5, 7, 9, 12-13, 15, 17, 20-21, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Goerigk U.S. Patent No. 6,303,398. Goerigk discloses executing a data verification procedure after a first process operation (e.g., col. 4 lines 44-54, col. 7 lines 13-24, col. 7 lines 43-50) of a plurality of wafers according to a manufacturing execution system database and obtaining a verification result, wherein the data verification procedure verifies the data between the wafers and the MES database (col. 4 line 4 – line 5 line 18, col. 8 lines 57-65); dynamically producing a

Art Unit: 2125

carrier transfer sub-route of the wafers according to the verification result (e.g., col. 5 lines 19-38, col. 8 lines 1-24, col. 8 line 66 – col. 9 line 20); executing the carrier transfer sub-route of the wafers (e.g., col. 5 lines 19-38); and executing a second process operation for the wafers (e.g., col. 5 lines 38-45);

wherein executing the carrier transfer sub-route further comprises updating the MES database (e.g., col. 5 line 45 – col. 6 line 18); wherein the carrier transfer sub-route is enabled by transferring the wafers from a first carrier to a second carrier (e.g., col. 5 line 45 – col. 6 line 18); wherein the first process operation and the second process operation are stored in a first database (e.g., col. 7 lines 51-55); wherein the carrier transfer sub-route is stored in a second database (e.g., col. 5 lines 49-54, col. 8 lines 1-24).

A system for automatic carrier transfer, comprising: a first execution module, executing a data verification procedure after a first process operation of a plurality of wafers and obtaining a verification result (e.g. Fig. 1 #1, Fig. 1 #3, Fig. 1 #5); a sub-route production module, coupled to the first execution module, producing a carrier transfer sub-route according to the verification result (e.g., Fig. 1 #1); a sub-route execution module, coupled to the sub-route production module, executing the carrier transfer sub-route of the wafers (e.g., Fig. 1 #5); and a second execution module, coupled to the sub-route execution module, executing a second process operation for the wafers (e.g., Fig. 1 #6-9).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6, 14, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goerigk as applied to claims 1, 9, and 17 above, and further in view of Babbs et al. 6,520,727. Goerigk discloses that the carrier transfer sub-route is enabled by splitting the wafers in the first cassette, or carrier (e.g., col. 6 lines 6-18). Goerigk does not explicitly disclose that the wafers are transferred to at least two carriers. However, Babbs et al. discloses a modular wafer sorter that splits wafers from one cassette into two or three other cassettes (col. 2 lines 29-40). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Goerigk with Babbs in order to route the split wafers of Goerigk to two different subsequent processes.

8. Claims 8, 16, 24, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goerigk as applied to claims 7, 15, and 23 above. Goerigk discloses most all of the features of claim 33. Goerigk discloses that the first process operation and the second process operation are stored in a database and are selected for processing of the wafers prior to executing the first process operation (e.g., col. 7 lines 51-55). Goerigk also discloses that the carrier transfer sub-route is stored in a database

Art Unit: 2125

(e.g., col. 5 lines 49-54, col. 8 lines 1-24). Goerigk does not appear to *explicitly* disclose that the databases can be two separate databases. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to separate the database of Goerigk into two databases in order to shorten the access time of the data managing system that selectively accesses the database (col. 3 lines 62-66). Two smaller databases would result in a smaller amount of stored data than that contained in a single larger database and would thus reduce the access time required when the computer program that controls the operation of the entire production line (col. 5 lines 25-27) only needs to access one of the data sets. A single, larger database would require a longer access time. This type of modification would have been well known to one of ordinary skill in the art at the time of the applicant's invention.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any


Art Unit: 2125

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan A. Jarrett whose telephone number is (571) 272-3742. The examiner can normally be reached on 10:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ryan A. Jarrett
Examiner
Art Unit 2125

2/13/05

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100